

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application:

LISTING OF CLAIMS:

1. (currently amended): A laser material processing method for processing a printed wiring board to form a blind hole, a groove or a through hole by applying a laser beam to an insulating layer of said printed wiring board, comprising~~including~~:

- ~~a first step of~~ processing said insulating layer at a predetermined energy density;
- ~~a second step of~~ hardening said insulating layer by applying a laser beam at a lower energy density than said predetermined energy density of said first step around a processed portion processed in the processing step~~said first step~~; and
- ~~a third step of~~ removing the residual smear.

2. (currently amended): The laser material processing method according to claim 1, wherein ~~characterized in that~~ the energy density is $0.5\text{J}/\text{cm}^2$ or less in the hardening step. ~~said second step.~~

3. (currently amended): The laser material processing method according to claim 1, wherein ~~characterized in that~~ the energy density is $0.6\text{J}/\text{cm}^2$ or less in applying laser beam to said insulating layer made of polyimide resin in the hardening step. ~~said second step.~~

4. (currently amended): The laser material processing method according to claim 1 ~~any one of claims 1 to 3~~, wherein ~~characterized in that~~ the area to apply laser beam in the hardening step ~~in said second step~~ is about double the processed area in the processing step. ~~said first step.~~

5. (currently amended): The laser material processing method according to claim 1~~any one of claims 1 to 4~~, wherein ~~characterized in that~~ a carbon dioxide gas laser having a wavelength of 10.6 μ m is used for the laser material processing.

6. (currently amended): A laser material processing method for processing a printed wiring board to form a blind hole, a groove or a through hole by applying a laser beam to an insulating layer of said printed wiring board, comprising~~including~~:

~~a first step of~~ processing said insulating layer at an energy density of 15J/cm²;
~~a second step of~~ hardening said insulating layer by applying a laser beam at an energy density of 0.5J/cm² or less around a processed portion processed in the processing step~~said first step~~; and
~~a third step of~~ removing the residual smear.

7. (currently amended): The laser material processing method according to claim 1~~any one of claims 1 to 7~~, wherein ~~characterized in that~~ one pulse of laser beam is applied for a pulse beam on time of 10 μ s in the hardening step. ~~said second step~~.

8. (currently amended): The laser material processing method according to claim 1~~any one of claims 1 to 7~~, wherein ~~characterized in that~~ laser irradiation in the processing step ~~said first step~~ and laser irradiation in the hardening step ~~said second step~~ are performed at the same time.

9. (new): The laser material processing method according to claim 6, wherein one pulse of laser beam is applied for a pulse beam on time of 10s in the hardening step.

10. (new): The laser material processing method according to claim 6, wherein laser irradiation in the processing step and laser irradiation in the hardening step are performed at the same time.